

### ABSTRACT OF THE DISCLOSURE

Method for producing substrates charged with materials, including placing the substrate into an evacuated vacuum container. The substrate is exposed to a reactive gas which is adsorbed on the surface. The surface with the adsorbed reactive gas is exposed to a low-energy plasma discharge with ion energy  $E_{i0}$  on the surface of the substrate of  $0 < E_{i0} \leq 20$  eV; and an electron energy  $E_{e0}$  of  $0 \text{ eV} < E_{e0} \leq 100$  eV. The adsorbed reactive gas is allowed to react at least with the cooperation of plasma-generated ions and electrons.